Polyolefin Resin Tubing

Clean-conscious product

PL

For clean piping (flexible)

Features

- A clean tubing suitable for equipment and applications with fluids such as clean air, N2 gas, pure water and various chemical liquids.
- Environment-friendly eco tubing. When burned at 750°C, PL tubing generates only carbon dioxide gas, no nitrogen oxides (NOx), no sulfur oxides (SOx), and absolutely no dioxin.
- Produced, end-sealed, heat-sealed for shipping in a cleanroom.
- Made of special polyolefin resin with high water barrier performance and flexibility
- Low cost compared to fluorocarbon resin tubes.
- Compliant with the MHLW Ministerial Notification No.201(2006), MHW Ministerial Notification No.370(1959), Japan.

Product number table

Millimeter size type (Group 4)

Type	Outer diameter × Inner diameter (mm)	Max. working pressure (MPa at 20°C)	Min. bending radius (mm)	Weight (g/m)	Standard color (color symbol)					
					Black	Milky white	Red	Blue	Yellow	Green
					BK	MW	RE	BU	YL	GN
PL-4-4×2	4×2	1.5	15	10	●	○	●	●	●	●
PL-4-6×4	6×4	1.0	25	15	●	○	●	●	●	●
PL-4-8×6	8×6	0.7	35	20	●	○	●	●	●	●
PL-4-10×7.5	10×7.5		45	30	—	○	—	—	—	—
PL-4-10×8	10×8	0.5		25	●	○	●	●	●	●
PL-4-12×9	12×9	0.7	55	45	●	○	●	●	●	●

Inch size type (Group 1)

Type	Outer diameter × Inner diameter (mm)	Max. working pressure (MPa at 20°C)	Min. bending radius (mm)	Weight (g/m)	Standard color (color symbol)					
					Black	Milky white	Red	Blue	Yellow	Green
					BK	MW	RE	BU	YL	GN
PL-1-1/4	6.35×4.57	0.7	30	14	●	○	●	●	●	●
PL-1-3/8	9.53×6.99		40	30	●	○	●	●	●	●
PL-1-1/2	12.70×9.56		55	50	●	○	●	●	●	●

Inch size type (Group 5)

Type	Outer diameter × Inner diameter (mm)	Outer diameter	Max. working pressure (MPa at 20°C)	Min. bending radius (mm)	Weight (g/m)	Standard color (color symbol)
						Milky white
						MW
PL-5-3.18×2	3.18×2	1/8	0.9	7	4	○

☞ Applicable fittings for Group 5 are Chemifit C1 series and Chemifit C1S series with the same outer diameter.

Product number example

PL - 4 - 6×4 - BK - 100M

- 100M: Standard length (20M, 100M)
- BK: Tubing color symbol
- 6×4: Size (millimeter: outer x inner, inch: outer)
- 4: Group (4: millimeter, 1: inch, 5: inch)
- PL: Tubing name

Standard length

20M, 100M

Operating fluid, working temperature range

Operating fluid	Working temperature range
Air (clean air)	−60°C~+80°C
Water (pure water)	0°C~+80°C

☞ Contact us for various chemical liquids.
☞ See "Combination List of Tubing and Fitting" on page 8.

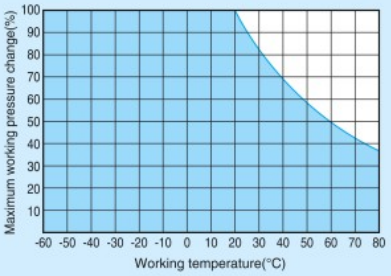
Negative pressure performance

−101.294kPa

Relation between the working temperature and the maximum working pressure

The maximum working pressure varies with the working temperature (environmental temperature). For use at an abnormal temperature, always check the maximum working pressure change in the graph below and keep the pressure within the indicated range.

⚠ Caution: Using tubes at a pressure outside the range may cause accidents or damage, for which Nitta is not liable.



Handling instructions

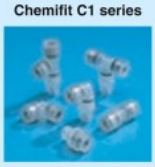
⚠ Caution: When water is used as the operating fluid, the tubing material might degrade depending on the additive. Contact us for details.

⚠ Caution: When water is used as the operating fluid, keep the surge pressure below the maximum working pressure. Also, do not allow the water to freeze.

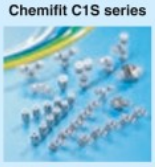
☞ See page 10 for common instructions for tubing products.

Applicable fittings

Chemifit C1 series



Chemifit C1S series



Chemifit CSE series

Chemifit CP series

PushOne A series

PushOne A series Mini type

PushOne E series

QuickSeal series Insertion type (brass)

Applicable fittings

QuickSeal series Insertion type (stainless)

Related products and product introduction

Chemifit C1 Speed controller

Reference

Chemical resistance specification table ·····P.198
Effective sectional area ···P.168
Negative-pressure performance list ·····P.169

(*1) Combinatory use of PL tubing and PushOne series / QuickSeal series mixes general and clean type performances. When using them together in a clean environment, be aware of how this could lower the cleanliness level.